Urban Food Security and Vulnerability - Developments and issues in Zimbabwe (Working paper November 2000)

(Views in this paper are the author's own and does not represent FEWS Net perception)

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1. Introduction

Since the severe drought of 1991/92, Zimbabwe vulnerability and food security assessment has been largely concentrated in rural areas. The focus of early warning and food security monitoring in rural areas was in support of the post colonial Government Policy. It has been Government policy since 1980 to channel most resources and developmental efforts in the rural areas, which suffered from colonial deprivation to development. At least 65 percent of the population live in the communal areas, majority of who are poor. This called for food security analysts to concentrate in this sector. From the 1980s, food security and vulnerability assessment methodologies have been developed to answer food relief targeting of the agro based rural areas at the detriment of the other sectors such as urban areas, the labour force in the commercial farming areas and mine workers.

2. The Changing Environment - the Necessity for Urban VA

Urban population in Zimbabwe has grown by 13 percent in 20 years compared to the rural areas. In 1980 the urban population in Zimbabwe was 22 percent of the national total and has increased to 35 percent in 2000. The urban population is estimated to grow by a further 14 percent to 49 percent in 2020. This alarming urban growth rate is a result of rural urban migration as the rural poor look for opportunities in urban areas compounded by natural growth. The Poverty Assessment Studies carried out in 1995/96 in Zimbabwe estimated that 39 percent of the population in urban areas is poor. Further estimates in 1999 estimates that 60 percent of the urban population is poor as a result of the deteriorating economic conditions in the country.

The deteriorating economic environment from 1990 has increased the breakdown of rural urban family linkages. The increase in cost of living and the changing social cultural environment has decreased the usual urban rural transfers and vise versa, reducing coping mechanisms of households. The deteriorating economic conditions has resulted in high levels of unemployment and underemployment, destruction of the community social fabric and reducing interdependency between urban households. These factors, compounded by the increase in the number of people employed in the informal sector, increase in urban agriculture and the mushrooming of peri - urban squatter camps, has made urban food security and vulnerability ever more important and interesting.

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3. Conceptual Approach to Urban Food Security and Vulnerability Assessment

3.1. Some Approaches Tried in Urban Areas

From a review on urban vulnerability done under FEWS III, a number of approaches to urban vulnerability were suggested and these are;

a) Trigger Indicators or Threshold: Looks at indicators such as trigger indicators such chronic malnutrition rate, school attendance, etc.
b) Income Employment Indicators: This looks at the income level of both formal employment and informal activities such as petty trade, etc.
c) Price Indicators: Chooses price indicators that reflect the expenditure pattern of poor households. This includes price of maize, etc.
d) Community based measure of poverty and food insecurity: Conduct poverty studies, concentrating on the poverty based consumption lines. They have been criticized for not scrutinizing the underlying causes of poverty.
e) National Food Security Measure: Done in surveys and looks at the household's own perception of food security status. It a subjective measure, which does not give objective causes of food insecurity.
f) Food Security and Nutrition Profiles: The profiles rely on triangulation of several research methods including secondary data, key informants, formal household interviews and group interviews.
g*) Asset Vulnerability:* Based on Moser's Asset Vulnerability Framework. It is based on the fact that a household and their community have categories of assets: labor, housing, social and economic infrastructure, inter-house relationships, etc that are subjected to shocks
h) Cumulative Food Security Index: Uses an index of coping strategies as an indicator of household food insecurity, with an agreed severity ranking of the coping strategies.

4. Measurements of Food Security and Vulnerability in Zimbabwe Urban Areas

4.1. The Consumer Council of Zimbabwe and its Food basket

The Consumer Council of Zimbabwe (CCZ) came up with a standard food basket of which they have been monitoring the prices. This standard basket constituted some years back has not been revised to capture the changes in the basket composition over the years. The CCZ food basket for a low-income urban household of 6 people (2 adults and 4 children) is composed of

Food

2 x 2kgs margarine
3 x 20 kgs roller meal
5 x 2 kgs White sugar
3 x 250 grams Tea Leaves
2 x 750 Mls Cooking oil
1 x 500 Mls Fresh Milk daily
1 Loaf of bread daily
Meat
Vegetables

Non Food

Transport
Soaps and Detergents
Rent 3 rooms in the High density area
Durable household goods
Maintenance and heat
Health
Education
Clothing and Footwear

Apart form monitoring the aggregate change in the value of the food basket and making inferences on the standard of living, no effort has been made to look at the relative changes in the income levels of the consumer. Also the level and rate of substitution of commodities within the basket by the household has been downplayed. Monitoring the value of the basket and price trends is an important tool, but does not answer the fundamental questions of;

a) Who (which socio-economic group) has been affected by the price movements to the point of diminishing rate of substitution of commodities, hence affecting their basic caloric requirements?
b) To what extend has the non food items eg education and health suffered due to the increase in prices, affecting the food access and utilization and who are the households and were are they located?
c) How have incomes sources shifted both formal and informal and what livelihood strategies have been intensified in use to copy with increased price of commodities?

4.2. Poverty Datum line work and the standard basket

Different methods can be employed to determine the Poverty Datum Line (PDL) and these include; a) the food energy method
b) the least cost diet method
c) the cost of basic needs method

In Zimbabwe, two separate poverty assessment studies were done in 1995 for the first time established poverty thresholds for both urban and rural areas. The Poverty Assessment Study Survey (PASS) and the Income Consumption and Expenditure Surveys (ICES) came up with different Poverty Datum Lines. The studies have managed to set the PDL by province taking into consideration the CPI for different provinces and distiquishing the differences between urban and rural areas. Two basic thresholds were established at provincial level as baseline, (a) the Food Poverty Line (PFL) and (b) the Total Consumption Poverty Line (TCPL). These thresholds were based on the Poverty Datum Line (PDL) established under the study of minimum consumption needs of families by Verity Cubit in 1994. The PDL concept is aimed at measuring household well being. It measures wealth, income, expenditures and consumption, therefore capturing food security. The FPL measures the minimum consumption expenditure necessary to ensure that each household member (if all expenditure were devoted to food) consume a minimum food basket representing 2,100 calories. Any consumption below the PFL, the household is deemed *very poor or extremely poor*. The TCPL, in addition to the minimum food basket include allowances for non-food minimum need requirements, such as housing, clothing, transport, health care, etc. If consumption is less than TCPL, the household is considered *poor*.

In establishing the PDL, the Central Statistical Office (CSO) used the “cost of basic need method”. The method identified a “ minimum needs basket” of food items and other consumption goods (the basket) and then values them using market prices. The value

represents the minimum expenditure required to attain a minimum level of well being. The value of the minimum need basket will vary depending on the composition of the basket and prices and it is important that the basket be consistent with expenditure patterns of the poor.

The representative basket was valued using market prices of 10 provinces of Zimbabwe. The representative basket could also be varied by location or a standard basket used for the whole country. The differentiation between urban and rural baskets was noted because of the differences in the level of substitution of goods within the rural and urban areas. Hence different composition of the basket and values was recognized between regions and in the rural and urban areas, with a different PDL being constructed by location. However, the CSO used a standard food basket shown below;

Table 1. Food Commodities Include in the Minimum Needs basket and their share of Total Food Consumption Expenditure

Commodity	***Units***	**Kcal/Unit***	**Share of minimum needs food basket**	**Quantity kg/person/yr**
Maize (including own produce)	100 grams	310	0.28	134.7
Bread	Standard Loaf	2100	0.06	18.3
Rice	100 grams	311	0.01	0.7
Flour	100 grams	291	0.02	3.6
Beef	100 grams	251	0.12	11.1
Poultry	100 grams	216	0.02	2.4
Fish	100 grams	299	0.05	3.5
Milk & eggs (including own-produce)	1 cup (244 gms)	150	0.05	15.5
Fats & oils	100 grams	895	0.06	5.7
Rape	100 grams	36	0.03	13.1
Cabbage	100 grams	20	0.01	5.3
Tomatoes	100 grams	16	0.01	3.1
Own Consumed vegetables	100 grams	24	0.18	66.7
Groundnuts	100 grams		0.02	8.4
Potatoes & tubers	100 grams	78	0.02	6.6
Sugar	100 grams	375	0.08	13.3
Pulses	100 grams	330	0.01	10.5
Salt	100 grams		0.01	2.9

Source CSO – Poverty in Zimbabwe July 1998

These studies could be used as baseline data if disaggregated data can be obtained and since the CSO has continued monitoring some of the indicators, this could be the basis for;
a) Identifying the group of households, which are food insecure and their condition.
b) Work out a model, which will compute how households could be reacting to the continued change in prices

4.3. The Consumer Price Index (CPI)

The year on year inflation rate is measured using a set of commodities in the CPI. The CPI measures pure price changes (*as prices vary*) of a fixed standard of living as reflected by given weights of a basket of goods and services. The weights in use currently are based on the 1990/91 Income Consumption and Expenditure survey and the CSO is planning to use the 1995/96 ICES to come up with new weights from December 2000. The items considered in the CPI are as shown in Table 2.

Table 2. Commodities in the CSO - CPI and their Respective Weights

Groups & Subgroups	Weights
Food	29.2
Bread & cereals	8.3
Meat	7.6
Fish	0.7
Milk, cheese and eggs	2.9
Oils and fats	1.7
Fruits and vegetables	4.8
Coffee and tea	0.4
Condiments and confectionery	2.3
Other foods	0.5
Drink and tobacco	9.8
Drink	8.7
Tobacco	1.2
Clothing and footwear	9.8
Clothing	7.8
Footwear	2
Rent, rates, fuel and power	18.7
Rent	13.4
Rates	1
Repair and maintenance	0.4
Fuel and power	4
Furniture and household stores	7.2
Furniture and carpets	1.3
Soft furnishings	1.6
Household utensils	0.6
Household operations	3.3
Household equipment	0.3
Medical care	2.8
Medicines	0.5
Fees	2.4
Transport and communications	8.4
Purchase of motor cars	0.4
Purchase of bicycles	0.1
Vehicle running costs	4.4
public transport	3.1
Communication	0.5
Recreation and entertainment	1.9
Education	7.6
school fees	6.1
school uniforms	1.5
Miscellaneous goods and services	4.4
Personal care and effects	1.8
Other goods and services	0.9
Domestic workers' wages	1.7
All Items	100.0
Food (CPI) % for September 2000)	29.2
Non-Food (CPI % for September 2000)	70.8

Source: CSO

The CPI ha been a useful tool in describing the general conditions of the urban poor, but from its use it has not been possible to describe the impact of the changes in the prices to the various socio economic groups in urban areas. The CPI could have been better placed if like in the past was calculated for the poor and the rich households as the basket of commodities differ substantially.

4.4. Silveira House and the rural food basket

From 1997, Silveira House conducted a rural shopping basket, recording the monthly prices of a number of common items in a budget for rural families. Using field staff, Silveira House came out with an average household basket, based on household purchases. The typical basket was based on the household size of 7 people. To record maize meal in the basket, an attempt was made to record the costs of purchased pre-packed roller meal as well as the cost of growing and milling one's own grain. The rural shopping basket is shown in Table 3.

Table 3. Basic Commodities Comprising the Rural Food Basket (Equivalent to the urban poor)

Commodity	**Amount**
Maize meal (Roller)	3.155
Salt	1.491
Sugar (White)	2.272
Soap (washing) – Perfection	4.5
Soap (bath)- Lifebouy	3.4
Cooking oil	3.036
Bread (white)	31
Paraffin	15
Matches	6.8
Tea (Three Leaves)	2.556
Sterimilk	48.167
Candles	5
Flour (Self Raising)	11.1
Dried fish Vaseline	19.6
Maize (seed)	12
Fertilizer (Compound D)	0.037
Fertilizer (Ammonium Nitrate)	0.075
Milling	3.943
Maize Milling and costs	

Source: Silveira House

As with the CSO, Silveira House derives an index, which is used to measure the food security changes. Unlike the CSO index, the Silveira House index does not include non food expenses such as medical, school fees, etc. This Index, calculated on a monthly and annual basis is good indicator for measuring food security for both the rural and urban poor households.

5. Other Socio-economic data Available for Urban Areas

Various socio-economic surveys covering urban centers have been conducted in the past and these provide good baseline data; A survey to look at poverty data available was done

in September 1998 “Poverty Data and Information needs assessment for Zimbabwe” by Malaba J. A. and Chipika J. T.commissioned by Ministry of Public Service Labour and Social Welfare. The report details the information available and the data gaps. Another rapid survey specifically looking at urban areas was done under FEWS 3 “Assessing Urban Food Security - adjusting Rural Vulnerability assessment framework to urban environments” by Patricia Bonnard in May 2000. All the two sources sites the information collected on the subject and the gaps.

6. The Way forward for Urban Food Security assessment and Monitoring in Zimbabwe.

The way forward has to be determined by the objectives, which have to be achieved, but basically three issues have to be captured whatever methodology is used;

a) The need to assess and monitor food security indicators affecting the urban food basket.
b) The need to assess and monitor coping strategies consumers in urban areas employ.
c) Assess and monitor the general socio-economic indicators such as inflation and how they impact on food security.

6.1. Level of analysis

Like in rural areas food security assessments and monitoring in urban areas should be concerned with identifying households that are food insecure or likely to become food insecure over a given period of time. Unlike in rural areas where the geographical location of the household is permanent, in urban areas some of the households may be perpetually mobile from time to time as they shift the rented accommodation. Identifying food insecure households by geographical location is normally difficult, except if a large geographical area is food insecure. Hence in urban food security analysis, a combination of both geographical and socio-economic grouping of the population should be considered depending on situation, more emphasis should be placed on identifying socio-economic groups as though in general rich people and food secure people stay in the low density areas whilst the poor and the likely food insecure are in the high density areas. It is the mixture of the urban population that dealing with socio economic groups is likely to be a better unit of analysis than geographical areas.

6.2 Frequency of Analysis

Once a good baseline is established it is not necessary to conduct a detailed survey and analysis on an annual basis as is done in rural VAs. Monitoring of the indicators is however necessary and inferences could be made on the condition of urban food security from these indicators. The frequency of the detailed analysis is a function of political and macroeconomic change. At least twice a year, indicators should be collected and the urban food security situation report produced.

6.3. First Level of Monitoring and analysis

Consider how the general social, economic environment affects the food security of the household. The analysis and monitoring as in the past not been able to answer the question who are and where are the urban food insecure. This includes use of

a) Social Indicators

Share of public expenditure on basic services in GDP
Enrolment rates for both males and females in education
Under five mortality
Immunization
child malnutrition
female to male life expectancy
fertility rate
martenity mortality
Illness and death
Separation and divorce

b) Socio-economic Indicators

Inflation (CPI)
Food price increases
Non food price increases
Exchange rate devaluation/depreciation
Policy and regulations
Unemployment
Crime
Social and economic decline
Conflict
Natural disasters
Total consumption
Wages
Rural terms of trade

c) Changes in the poverty lines

Have disaggregated data and continue the monitoring of the poverty datum lines

6.4. Second level of Monitoring and Analysis

The basis of doing a food security analysis in urban areas is identify the various food baskets for the different socio-economic groups and see how the basket changes with change in prices as a baseline survey. Then monitor the indicators and look at how they affect the food basket. Some of the indicators require to be structured into questionnaires.

6.4.1. Indicators Affecting Food Basket

The food basket in any sector determines the food security status (access, availability, utilization and stability of supply) of the household. In rural areas, most of the basket is comprised of own production with some of the commodities supplemented by purchases, varying from one area to the next. In urban areas the greater part of the basket is from purchases (the basket is market depended). Hence, the fundamentals of analyzing food security and vulnerability in urban areas could be based on the following equation;

Fb = f(P, Ef, Ei, S, R, Ua, Ne, Cr, Df)

Where:
Fb Food basket
P Price of commodities that comprise the basket
Ef Earnings from formal employment
Ei Earnings from the informal sector
S Savings
R Remittances
Ua Urban agriculture
Ne Non food Expenses
Cr Access to credit
Df Demographic factors e.g. dependency ratio, education level, and length of time in residency

The fundamental deviation from the factors affecting food basket is not to monitor how the food basket value shifts by looking at the changes in CPI and the FPL. This traditional approach assumes that the basket remains constant as the factors affecting the basket shift.

The conceptual approach would be to understand the various food baskets for various groups of people by level of income and region. Secondly see how the shift in the indicators influence the composition of the basket and hence its impact on a particular group and its food security. Principally a shift in one of the right side of the function has an influence on the size and composition of the basket. There is a tendency of substitution of commodities in the basket. A decrease in income of a household could lead to a decrease in the consumption of bread, assuming the price of bread is increasing or decrease in consumption of refined maize flour and these being substituted by coarse grains but without necessarily reducing the caloric value of the basket. Hence, the need to monitor the changes in the basket composition rather than look at how the indicators have made an assumed basket value change. The indicators should be viewed in terms of how they lead to shifts in consumption and what influence this has to food security for particular socio-economic groups within the urban areas.

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